IN THE SPECIFICATION:

Please amend the paragraph beginning at page 2, line 15, as follows:

Basically, exposure methods are classified into two methods, that is, a unit-magnification transfer method and a projection method. The transfer method includes a contact method in which a mask and a workpiece to be exposed are contacted to each other, and a proximity method in which they are separated from each other with a small clearance. The contact method can provide high resolution, but there is a possibility that dust particles or fractions of silicon are press-contacted to the mask surface [[t]] to cause damage of the mask or scratch or fault of the workpiece. The proximity method can be free from such problems, but, if the clearance between the mask and the workpiece becomes smaller than the largest size of dust particles, similar damage of the mask may occur.

Please amend the paragraph beginning at page 5, line 9, as follows:

However, the proportional constants k_1 and k_2 usually take a value of about 0.5 to 0.7. Even if a certain resolution enhancing method such as a phase shift method is used, ~~it~~ the proportional constants would not go ~~beyond~~ below about 0.4. Therefore, it is difficult to improve the resolution by decreasing the proportional constant. Further, in projection exposure apparatuses, it is said that generally the resolution has its limit approximately at the wavelength of a light source used. Even where an excimer laser is used, it is difficult for a projection exposure apparatus to form a pattern not greater than 0.10 μm. Additionally, if there is any light source having shorter wavelength present, optical materials to be used for the projection optical system (i.e. lens glass materials)

could not transmit exposure light of such shorter wavelength, and thus ~~(b cause~~ because of resultant failure of projection upon a workpiece to be exposed) the exposure would end in failure. More specifically, almost all the glass materials have a transmissivity nearly equal to zero, in the deep ultraviolet region. Synthetic quartz which can be produced by use of a special production method can meet exposure light of a wavelength of about 248 nm. However, the transmissivity of it decreases steeply in regard to the wavelength not greater than 193 nm. For these reasons, it is very difficult to develop a practical glass material having a sufficiently large transmissivity to exposure light of a wavelength not greater than 150 nm, corresponding to a fine pattern of 0.10 μm or narrower. Furthermore, in addition to the transmissivity, a glass material to be used in the deep ultraviolet region must satisfy certain conditions in respect to plural standpoints such as durability, refractivity, uniformness, optical distortion, machinability and so on. These factors also make the development of a practical glass material difficult.

Please amend the paragraph beginning at page 6, line 22, as follows:

To address such problem, exposure apparatuses which are based on the principle of near-field optical microscope (Scanning Near-Field Optical Microscope: SNOM) have been recently proposed as the measure for enabling microprocessing with an order not greater than 0.10 μm. This is an apparatus in which, by use of near-field light seeping or escaping from small openings having a size not greater than 100 nm, for example, the workpiece (or a resist applied to it) is locally exposed thereby to exceed the limit of the wavelength of light. However, in such lithographic apparatus based on SNOM

structure, the microprocessing operation is carried out using one or a few processing probes in a single continuous drawing stroke. The throughput is therefore very low.

Please amend the paragraph beginning at page 8, line 12, as follows:

Japanese Laid-Open Patent Application No. 2000-112116 and a paper "Sub-diffraction-limited patterning using evanescent near-field optical lithography", by M.M. Alkaisi et al, Appl. Phys. Lett. vol.75, No.22 (1999), have reported that the intensity of near-field light escaping from small openings changes between a case where light being polarized in a direction perpendicular to the lengthwise direction of the small opening is incident and a case where light being polarized in a direction parallel to the lengthwise direction is incident.

Please amend the paragraph beginning at page 10, line 7, as follows:

In accordance with an aspect of the present invention, there is provided ~~An~~ an exposure method, comprising the steps of: closely contacting, to a workpiece, a mask having an opening formed with lengthwise directions extending in orthogonal directions; and projecting, onto the mask, exposure light being polarized in a direction other than the directions mentioned above. With this exposure method, the intensity of near-field light escaping from the opening can be made even.

Please amend the paragraph beginning at page 13, line 22, as follows:

Figure 3 is a schematic and ~~plane~~ plan view for explaining the relation between a small opening and the direction of polarization of exposure light.

Please amend the paragraph beginning at page 13, line 26, as follows:

Figure 4 is a schematic and ~~plane~~ plan view for explaining the relation between a small opening and the direction of polarization of exposure light.

Please amend the paragraph beginning at page 15, line 2, as follows:

In an exposure method according to an aspect of the present invention, it comprises the steps of: closely contacting, to a workpiece, a mask having an opening formed with lengthwise directions extending in orthogonal directions; and projecting, onto the mask, exposure light being polarized in a direction other than the directions mentioned above. With this exposure method, the intensity of near-field light escaping from the opening can be made ~~eve~~ even. The method may further comprise detecting the lengthwise direction of the opening of the mask, and generating the exposure step on the basis of the detection. In the projecting step, exposure light being polarized in a direction with an angle of approximately 45° with respect to the lengthwise direction of the opening, may be projected onto the mask. The mask may have an opening formed only in mutually orthogonal directions.

Please amend the paragraph beginning at page 15, line 21, as follows:

In an exposure mask according to another aspect of the present invention, the exposure mask comprises a mask base material supported by a substrate and being effective to transmit exposure light therethrough; a light blocking film formed on the mask base material and being effective to block the exposure light; and an opening formed in the

light blocking film and having its lengthwise directions extending in mutually orthogonal directions. With this exposure mask, where exposure light having a polarization direction ~~with~~ of 45°, for example, with respect to the opening is projected, through the openings having lengthwise directions extending only in the mutually orthogonal directions, the exposure light can be separated into polarized lights of the same intensity. Therefore, near-field light of even strength can be produced. The light ~~blooding~~ blocking film may have a mark which mark bears information regarding the lengthwise direction of the opening.

Please amend the paragraph beginning at page 18, line 22, as follows:

The exposure apparatus 1 operates, with use of the mask 400 corresponding to the whole surface of the plate 700, to perform unit-magnification batch exposure to transfer a predetermined pattern formed on the mask 400 onto the plate 700. However, the present invention can be used with a mask ~~440~~ smaller than the plate 700, and it can be applied to various exposure methods such as a step-and-repeat exposure method in which exposure of a zone of the plate 700 is repeated while changing the position of the plate 700, or a step-and-scan exposure method. The step-and-scan exposure method is a method in which the mask 400 and the plate 700 are continuously scanned with respect to exposure light projected thereto to transfer the pattern of the mask 400 onto the plate, and in which, after completion of exposure of a single shot, the plate 700 is moved stepwise to move a subsequent shot to the exposure region. The step-and-repeat exposure method is a method in which, for each batch exposure of a shot of the plate 700, the plate 700 is moved

stepwise to move a subsequent shot to the exposure region.

Please amend the paragraph beginning at page 19, line 18, as follows:

The light source unit 100 has a function for generating illumination light for illuminating the mask ~~300~~ 400 which has a circuit pattern to be transferred. As an example, a laser which emits ultraviolet light or soft X-rays may be used as the light source. The laser may be ArF excimer laser of a wavelength of about 193 nm, KrF excimer laser of a wavelength of about 248 nm, or F2 excimer laser of a wavelength of about 153 nm, for example. However, the laser is not limited to excimer lasers, and YAG laser may be used, for example. Also, the number of lasers is not limited. Further, the light source to be used is not limited to lasers, and lamps such as one or plural Hg lamps or Xenon lamps may be used.

Please amend the paragraph beginning at page 24, line 13, as follows:

The lithography which is based on near-field light can transfer the pattern at a unit magnification. Therefore, the patterns to be defined by the small openings 432 should be formed with a size of about 1 to 100 nm, which is small as compared with the wavelength of the exposure light from the light source unit 100. If the width of the patterns of the small opening 432 is larger than 100 nm, not only the near-field light but also direct light having strong light intensity can transmit through the mask 400, with an undesirable result that the light quantity level changes largely with the pattern. Also, if the width is less than 1 nm, the exposure itself is not unattainable, but the intensity of near-field light escaping from the mask 400 becomes very small so that, impractically, it takes a long time

to complete the exposure.

Please amend the paragraph beginning at page 27, line 12, as follows:

As shown in Figure 5, in the mask 400 of this embodiment, the small openings 432 have their lengthwise directions extending only in two directions, i.e. x and y directions. Thus, it has a mixture of small openings 432 shown in Figures 3 and 4. It means that the same exposure light is incident on the small openings 432 shown in Figures 3 and 4, and that the polarized light ~~have~~ has the same intensity in both of the x-direction component and the y-direction component. Therefore, whichever the lengthwise direction of the small opening 432 extends in x direction or y direction, the intensity of the near-field light escaping from the small openings 432 becomes even. Namely, in the mask 400 according to this embodiment, the polarization direction of exposure light with respect to the lengthwise direction (x and y directions) of the small openings 432 is set at about 45°, by which the intensity of the near-field light escaping from the small openings 432 can be made even, without the provision of a polarizer in the mask 400.

Please amend the paragraph beginning at page 31, line 24, as follows:

The plate 700 comprises a substrate ~~701~~ 710 such as a wafer, and a photoresist 720 applied to it. The plate 700 is mounted on a stage 750. The application of the resist 720 includes a pre-process, an adhesion enhancing agent applying process, a resist coating process, and a prebaking process. The pre-process includes washing and drying, for example. The adhesion enhancing agent applying process is a surface property improving process (hydrophobic process based on surface active agent coating) for

improving the adhesion between the photoresist 720 and the substrate 710, and an organic film such as HMDS (Hexamethyl-disilazane), for example, is applied or vapor processed. The pre-baking process is a baking (sintering) process, while it is mild as compared with that to be carried out after the development, and it removes the solvent.

Please amend the paragraph beginning at page 38, line 27, as follows:

The exposure process is carried out in the state described just above. More specifically, exposure light emitted from the light source unit 100 and having been transformed by the collimator lens 200 into parallel light, is introduced into the pressurized vessel 610 through the polarizer 310 and the light transmitting window 620. Here, the exposure light has been polarized in a direction corresponding to the small openings 432 formed in the light blocking film 430, that is, the polarization direction of the exposure light has an angle 45° with respect to the lengthwise direction of the small openings 432. The light introduced into the vessel 610 passes through the mask ~~440~~ 400 from the rear-surface side to the front-surface side thereof, that is, from the top to the bottom as viewed in Figure 1, thereby to produce near-field light escaping from the pattern as defined by the small openings 432 of the thin film 440. The near-field light scatters within the resist 720, to expose the resist 720. If the thickness of the resist 720 is sufficiently thin, the scattering of the near-field light within the resist 720 does not expand so widely, such that a pattern corresponding to the slits of the small openings 432, which are smaller than the wavelength of the exposure light, can be transferred to the resist 720.

Please amend the paragraph beginning at page 45, line 21, as follows:

For separation of the mask ~~440~~ 400 from the plate 700, the inside pressure of the pressurized vessel 610 was lowered by the pressure adjusting means 630 to a pressure lower than the atmospheric pressure approximately by 40 kPa, and then the mask 400 and the plate 700 were separated from each other.

Please amend the paragraph beginning at page 48, line 16, as follows:

Figure 7A illustrates a plan view of the mask 400A, at its front surface side on which the light blocking film 430A is provided. The mask 400A is arranged so that a pattern which is defined by small openings 432A in the thin film 440A is transferred to a resist 720 at a unit magnification, on the basis of near-field light. The bottom face of the mask as viewed in ~~Figure 7~~ Figure 7B corresponds to the front surface of the mask 400A on which the light blocking film 430A is attached, and the mask is disposed outside the pressurized vessel 610 of the pressure adjusting system 600.

Please amend the paragraph beginning at page 49, line 1, as follows:

The mask supporting member 410A supports the thin film 440A which comprises the mask base material 420A and the light blocking film 430A, and the mask supporting member is fixed (by adhesion, for example) to the bottom of the pressurized vessel 610 of the pressure adjusting system 600 shown in ~~Figure 7~~ Figure 6. The mask supporting member 410A comprises a member that can maintain pressure tightness to pressure changes in the pressurized vessel 610 as well as gas tightness of the pressurized

vessel 610. In this embodiment, the mask supporting member 410A is provided at the outer periphery of the mask 400A.

Please amend the paragraph beginning at page 51, line 4, as follows:

The lithography which is based on near-field light can transfer the pattern at a unit magnification. Therefore, the patterns to be defined by the small openings 432A should be formed with a size of about 1 to 100 nm, which is small as compared with the wavelength of the exposure light from the light source unit 100A. The pattern may have an arbitrary shape (e.g. L-shape or S-shape) as long as it is not greater than 100 nm. If the width of the patterns of the small openings 432A is larger than about 100 nm, not only the near-field light but also direct light having strong light intensity can transmit the mask 400A, with an undesirable result that the light quantity level changes largely with the pattern. Also, if the width is less than about 1 nm, the exposure itself is not unattainable, but the intensity of near-field light escaping from the mask 400A becomes very small so that, impractically, it takes a long time to complete the ~~exposure~~ exposure.